SYSTEM AND METHOD FOR PROVIDING A SELF HEATING ADJUSTABLE $TiSi_2$ RESISTOR

ABSTRACT OF THE DISCLOSURE

A system and method is disclosed for providing a self heating adjustable titanium disilicon ($TiSi_2$) resistor. A triangularly shaped layer of polysilicon is placed a layer of insulation material. A layer of titanium is applied over the polysilicon and heated to form a layer of C49 type of $TiSi_2$. A current is then applied to the small end of the triangularly shaped layer of C49 $TiSi_2$. The current generates heat in a high resistance portion of the triangularly shaped layer of C49 $TiSi_2$ and converts a portion of the C49 $TiSi_2$ to C54 $TiSi_2$. The lower resistance of the C54 $TiSi_2$ decreases the effective resistance of the resistor. A desired value of resistance may be selected by adjusting the magnitude of the applied current.